



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/443,262	11/22/1999	JUHA KALLIOKULJU	297-008939-U	6962

7590 03/01/2002

CLARENCE A GREEN
PERMAN & GREEN
425 POST ROAD
FAIRFIELD, CT 06430

EXAMINER

LY, NGHI H

ART UNIT

PAPER NUMBER

2682

DATE MAILED: 03/01/2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

CP

Office Action Summary

Application No.

09/443,262

Applicant(s)

ALLIOKULJU ET AL.

Examiner

Nghi H. Ly

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Kalmanek et al (US 6,094,424).

Regarding claim 1, Kalmanek teaches a method for a mobile station for performing a handover (see abstract) from a first network connection to a second network (see fig.3a and 3b networks 40, 50, 60 and 70) connection in a mobile telecommunication system providing for non-real time (see column 4 line 60-53) telecommunication connections over a radio interface between mobile stations and the fixed parts of the mobile telecommunication system (see fig.4 base stations 102, 103

Art Unit: 2682

and 108), comprising the steps of: suspending at least one active non-real time telecommunication connection between a mobile station and the fixed parts of the mobile telecommunication system (see column 2 line 30-38), performing a handover from the first network connection to the second network connection (see fig.3a and 3b box 31 move from network 50 to 70), and resuming the suspended non-real time telecommunication connection (see abstract or column 10 line 25-31).

Regarding claim 9, Kalmanek teaches a mobile station for communicating with the fixed parts of a mobile telecommunication system over network connections (see fig.3a and fig.3b), comprising means for executing the method according to claim 1 in order to perform a handover from a first network connection to a second network connection (see fig.3a and fig.3b the mobile 31 handover from network 50 to network 70).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

Art Unit: 2682

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kalmanek et al (US 6,094,424) in view of the admitted prior art and further in view of Nishio et al (US 6,192,039).

Regarding claims 2 and 4, Kalmanek teaches establishing the logical connections between the mobile station and said first serving node via said second radio network controller that constitute the second network connection (see fig.3a and 3b box 31 move from network 50 to 70 and see column 2 line 39-43). Kalmanek fails to teach the first network connection is a connection from the mobile station via a first radio network controller to a first serving node of a packet-switched data transmission network and the second network connection is a connection from the mobile station via a second radio network controller to said first serving node. The prior art admitted by applicant teaches the first network connection is a connection from the mobile station via a first radio network controller to a first serving node of a packet-switched data transmission network and the second network connection is a connection from the mobile station via a second radio network controller to said first serving node (see Applicant's Background of the invention page 2 line 6-9). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to provide

Art Unit: 2682

the teaching of the admitted prior art into the system of Kalmanek so that data can be transmitted in more manageable size.

The combination of Kalmanek and the admitted prior art fails to teaches the step of performing a handover comprises the substeps of: exhausting through the first network connection all transmission buffers that, at the time of suspending said at least one active non-real time telecommunication connection, contain data to be transmitted over the first network connection. Nishio teaches exhausting through the first network connection all transmission buffers that, at the time of suspending said at least one active non-real time telecommunication connection contain data to be transmitted over the first network connection (see column 14 line 55-65). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to provide the teaching of Nishio into the system of Kalmanek and the admitted prior art in order to made the buffer available for reuse by the next transmission.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kalmanek et al (US 6,094,424) in view of the admitted prior art and Nishio et al (US 6,192,039) and further in view of Keskitalo et al (us 6,073,032).

Regarding claim 3, the combination of Kalmanek, the admitted prior art and Nishio teaches a method according to claims 1 and 2. The combination of Kalmanek, the admitted prior art and Nishio fails to teach the first network connection is a macrodiversity connection comprising a direct connection between the mobile station

Art Unit: 2682

and said first radio network controller and an indirect connection between the mobile station and said first radio network controller via said second radio network controller. Keskitalo teaches the first network connection is a macrodiversity connection comprising a direct connection between the mobile station and said first radio network controller and an indirect connection between the mobile station and said first radio network controller via said second radio network controller (see column 1 line 62-64), the second network connection is a macrodiversity connection comprising a direct connection between the mobile station and said second radio network controller and an indirect connection between the mobile station and said second radio network controller via said first radio network controller (also see column 1 line 62-64), and the step of performing a handover comprises additionally the substep of changing the macrodiversity control from the first radio network controller to the second radio network controller (also see column 1 line 62-64). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to provide the teaching of Keskitalo into the system of Nishio, Kalmanek and the admitted prior art so that the quality of the reception signal could be improved by selecting the strongest signal from base stations.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kalmanek et al (US 6,094,424) in view of the admitted prior art.

Regarding claim 5, Kalmanek teaches claim 1. Kalmanek fails to teach the non-real time telecommunication connections are arranged according to a certain structure

of protocol stacks in a mobile station, a radio access network, a serving support node of a packet-switched data transfer network and a gateway support node of a packet-switched data transfer network, and the method comprises the steps of: communicating between a number of first peer entities between the mobile station and the radio access network, wherein said first peer entities are composed of a physical layer, a Media Access Control layer and a Radio Link Control layer. The admitted prior art teaches the non-real time telecommunication connections are arranged according to a certain structure of protocol stacks in a mobile station (see fig.1 box MS), a radio access network (see Back ground of the invention page 2 line 8-9 or Radio network controllers), a serving support node of a packet-switched data transfer network and a gateway support node of a packet-switched data transfer network (see Back ground of the invention page 2 line 8-9), and the method comprises the steps of: communicating between a number of first peer entities between the mobile station and the radio access network (see Back ground of the invention page 1 line 21-23) , and the first peer entities are composed of a physical layer (see Back ground of the invention page 1 line 16-21), a Media Access Control layer (see fig.1 box 102) and a Radio Link Control layer (see fig.1 box 103), and a Network Service layer (see fig.1 box 105) and a protocol layer (see Back ground of the invention page 1 line 21-23) for communication between the radio access network and the packet-switched data transfer network, and a Subnetwork Dependent Control Protocol Layer (see fig.1 box 108) which in the mobile station is immediately on top of the Radio Link Control layer (see fig.1 box 103) and in the serving support node of a packet-switched data transfer network is immediately on top of the

Art Unit: 2682

protocol layer for communication between the radio access network and the packet-switched data transfer network (see Back ground of the invention page 1 line 15-16). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify the teaching of the admitted prior art into the system of Kalmanek in order to provide packet-switched communication connection between mobile station and other networks.

The combination of Kalmanek and the admitted prior art fails to teach the communicating between a number of second or third peer entities between the radio access network and the serving support node of a packet-switched data transfer network. However, such as number of peer entities would have been obvious since the particular number of peer entities could have been determined by the inventors' choice. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to select such number of peer entities so that signals could be transmitted to many entities at the same time.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kalmanek et al (US 6,094,424) in view of the admitted prior art and further in view of Frodigh et al (US 6,122,293).

Regarding claim 6, the combination of Kalmanek and the admitted prior art teaches claims 1 and 5. The combination of Kalmanek and the admitted prior art fails to teach the steps of performing error detection and error-related retransmission as well as flow control between the mobile station and the radio access network on said Radio

Art Unit: 2682

Link Control layer. Frodigh teaches the steps of performing error detection and error-related retransmission as well as flow control between the mobile station and the radio access network on said Radio Link Control layer (see column 4 line 56-59). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify the teaching of Frodigh into the system of Kalmanek and the admitted prior art in order to check error during data transmission.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kalmanek et al (US 6,094,424) in view of Frodigh et al (US 6,122,293).

Regarding claim 7, Kalmanek teaches a method according to claim 1. Kalmanek fails to teach the first network connection and the second network connection are packet-switched connections for transmitting error critical data. Frodigh teaches the first network connection and the second network connection (see column 4 line 34-36) are packet-switched connections (see column 4 line 28-31) for transmitting error critical data (see column 8 line 56-60). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to modify the teaching of Frodigh into the system of Kalmanek in order to check error during data transmission.

9. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kalmanek et al (US 6,094,424) in view of Kanerva et al (US 6,052,385).

Regarding claim 8, Kalmanek teaches a method according to claim 1. Kalmanek fails to teach the first network connection and the second network connection are non-

Art Unit: 2682

transparent circuit-switched connections. Kanerva teaches the first network connection and the second network connection are non-transparent circuit-switched connections (see column 11 claims 8, 9 and claim 7 line 10-15). Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention was made to provide the teaching of Kanerva into the system of Kalmanek in order to transmit and receive data in predetermined format.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Raleigh et al (US 5,809,422) teaches distributed microcellular communications system.

b. Ivanov et al (US 5,513,380) teaches mobile speed dependent handover techniques in hierarchical mobile radio networks.

c. Roobol et al (US 6,307,867) teaches data transmission over a communications link with variable transmission rates.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (703) 605-5164. The examiner can normally be reached on 8:30 am-5:30 pm.

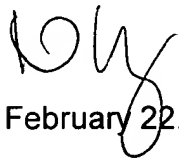
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on (703) 308-6739. The fax phone numbers for

Art Unit: 2682

the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Nghi H. Ly



February 22, 2002



VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600